

Jose A. Troche

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- PhD Student in Computer Science at University of Maryland, College Park
- M.Sc. in Computer Science at University of MD, College Park (Dec 2006), GPA 3.9
- B.Sc. in Computer Science with National Honors for Academic Excellence, UMSA, Bolivia (1997)
- Article "XML Digital Signatures in Web Services" sent to ORACLE Magazine, and interview published on Jan-Feb, 2004 issue (Pg. 29).
- 5 years of consulting experience with ORACLE Products.
- ORACLE Corporation subcontractor, integrating ESRI-ORACLE products (ArcSDE-Oracle, ArcIMS, ArcINFO).
- Research: Robotics (motion, localization, mapping, planning), Evolutionary Computation & Artificial Life (Genetic Algorithms, Particle Swarm Optimization, Ant Optimization Algorithms), Neural Networks Models, Sensor Networks.
- OCP - Oracle Certified Professional:
 - Internet Application Developer.
 - Applications Developer R2.
- Fluent in Spanish.

WORK EXPERIENCE

- ORACLE Corporation, Subcontractor Consultant (through Open Systems), 02/2000 - 02/2001
- Open Systems (Oracle Certified Solution Partner - CSP), Research and Development Manager, Oracle Consultant, 07/1997 – 08/2002
- Bolivian Government – SAFCO ILACO Project, Consultant, 03/1997 – 07/1997

SKILLS HIGHLIGHT

Oracle Products: JDeveloper 9i & 3, Web Services, Oracle 9i, 8i (8.1.5, 8.1.7), Spatial Option, Oracle 9iAS Application Server, Wireless Edition, , Pro*C, JServer, Portal, WEBDB, Forms 9i & 6i, Developer 2.x, Designer 6i & 2.x, OAS 4.x (limited), interMedia, Enterprise Manager, Workflow, Connection Manager, SQL*Loader, Imp/Exp.

ESRI Products: ArcGIS, ArcSDE 8, ArcIMS 3, ArcView 3.2, ArcINFO 8 (ArcCatalog, ArcMap, ArcToolbox).

MapInfo Products: MapInfo Pro 5.5, MapXtreme 2 (Java Edition).

Intergraph Products: GeoMedia Pro 5 (limited).

Other Products: Java 2 SDK, JDBC, Apache Web Server 1.3, Apache Jserv 1.1.2 (Servlet Engine), iPlanet Web Server 4 (formerly Netscape Web Server), IIS, AutoCAD, SQL Navigator,

X-Win32, Paint Shop Pro 5, Virtual Network Computing (VNC), Panasonic PBX Programming Software, etc.

Operating Systems: Sun Solaris, Windows 2K/NT/95/98, Linux, SCO.

Languages: Java, C/C++, HTML, JavaScript, Perl, Python, PL/SQL, SQL, Assembler (80x86).

Databases: Oracle 9i, Oracle 8i, Oracle 7.3.4, Informix, FoxPro, Access.

Management/Leadership Skills: 12-month Project/Team Lead.

Specialty Skills: Enterprise Database Systems and Architecture, Geographic Information Systems, E-Business Architecture, Graphical Interface Programming, Computer Systems Engineering – Development, Integration, Performance Analysis and Optimization, System Architecture Definition.

Life Cycle Expertise: Data Modeling, ER Modeling, Application Design and Development, Data Conversion, Technical Architecture Design, Logical and Physical Database Design, System Deployment, Implementation.

Communications: Internet, Intranets, Extranets, TCP/IP, LANs, Firewalls.

PROJECT EXPERIENCE

01/2002 – 08/2002

Co-leader Consultant, ASOBAN Bank Association, ACH Automatic Clearing House

Automatic Clearing House (ACH) is a system where many banks and financial institutions wish to transfer money between accounts through the ACH framework. In this context, a client of Bank A can make a deposit to another client's account in Bank B. Since each participating organization has its own systems in a diversity of platforms, it is impossible to agree in a common language or operating system. Nevertheless, Web Services offer an excellent solution to this problem. Among the requirements, it is important to know which bank sent some information (authenticity) and be sure that it was not tampered with in the process (integrity). In addition, a mechanism is required to guarantee that the source bank cannot deny that it sent the data, when it actually did (non-repudiation). XML Digital Signatures were used to fulfill these requirements.

Tasks Performed: Requirements Analysis. ER Modeling. Application and Architecture Design. Had meetings with executive board for initial data and application design validation. Logical and Physical Database Design and Application Design. Implementation of XML Digital Signatures standard using Oracle JDeveloper tools. Application Testing and Deployment on Oracle 9iAS Application Server.

02/2001 – 01/2002

Leader Consultant. COTEL Telephone Company. Traffic Control and Billing System.

Traffic Control and Billing is a system for controlling traffic from different sources and Telephone Systems. It was designed with flexibility in mind, so phone lines belong to categories that govern the billing. Each category contains one or several rules related to origin, target, time, date, duration, etc., that define the way charges will be calculated. Categories and rules can be parameterized without code modification. Since COTEL processes 30+ million calls per month, performance was

another issue to be seriously considered. Therefore, code was optimized for performance without losing flexibility.

Tasks Performed: Requirements Analysis. ER Modeling. Application and Architecture Design. Had meetings with executive board for initial data and application design validation. Logical and Physical Database Design. Main algorithm design and optimization. Application Development: web pages, applets and forms using Oracle Forms 6i. PL/SQL package development. Data Loading (using SQL*Loader). Application Testing and Deployment on Oracle 9iAS Application Server (Forms Services). Project management tasks: meetings and presentations with/to executive board, technical meetings, task assignments and control, scheduling, deliverables identification, etc.

02/2000 – 02/2001

Oracle Corp. Subcontractor Consultant. Development Alternatives Inc. CONCADE Project.

CONCADE is a project created to meet strategic focuses of the Counter-Narcotics Consolidation of Alternative Development Efforts. Its main components are a Geographic Information System (GIS) and the Performance Monitor Information System (PMIS).

Tasks Performed: Hardware evaluation. System Architecture Definition. GIS Software evaluation and decision making: ESRI, MapInfo, Intergraph (ESRI products were selected). GIS High Level Design. SUN Enterprise 220R Hardware Installation. SUN Solaris 7 Installation. RAID Hardware & Software Installation (SUN StorEdge RAID Manager 6.22). RAID distribution layout for Oracle DB and application implementation. ArcIMS 3 (ESRI) + ArcSDE 8.0.2 (ESRI) + Oracle Spatial 8.1.6 integration. WebDB 2.2 for Solaris installation and configuration. Assistance to the PMIS development team in PL/SQL Web Toolkit use and Designer/2000 Web Modules generation. Oracle Connection Manager installation, configuration and implementation for internet based connections. CISCO Router/Firewall configuration for external/internet connections. PMIS and GIS migration from development environment to production environment. ArcIMS installation and configuration. Apache Web Server installation. Website generation and customization using ArcIMS HTML-JavaScript Viewer and Java Viewer for maps publishing. ArcIMS templates modification. HTML-JavaScript web pages creation for querying GIS data.

7/1999 – 1/2000

Leader Consultant. COTEL Telephone Company. COTEL-104 Project.

COTEL-104 is a WebDB based system for publishing and querying information about the telephone company clients. Queries can be built based on phone number, client name, address, contract number, etc.

Tasks Performed: Requirements Analysis. ER Modeling. Application and Architecture Design. Had meetings with the client for initial data and application design validation. Logical and Physical Database Design. Data Conversion (from FoxPro to Oracle) and Data Loading (using SQL*Loader). Application Development: web pages generation using WebDB, custom packages creation using the PL/SQL Web Toolkit, queries optimization with hints, header/footer customization. Application Testing and Deployment. Fixed some failures in WebDB packages code. Analyzed some WebDB packages code and tables for creating specialized packages for migration of WebDB-based application components from development to production environment. Created an additional Module that automated the application users creation and their related grants according to their functions (superuser, normal user, etc.).

8/1998 – 5/1999

Computer Service Department Responsible. Río Grande Bible Institute.

Tasks Performed: General software/hardware maintenance and support for 100+ PCs. Hardware assembly. PC hardware evaluations. Windows 95/98 Operating System installations. Network configuration and maintenance. Microsoft Office and Perfect Office installations. Internet configurations. Assistance in the Accounting System Development.

4/1998 – 5/1998

Consultant. Banco Unión. Unibanca 2000 Project.

Unibanca 2000 is an Oracle-based bank application.

Tasks Performed: Worked as temporary substitute of a technical team leader. Checked and modified some Developer/2000 modules: created a Reports Module, modified a Reports Module, fixed several Forms modules, restructured the main Menu Module. Performed administrative tasks as team leader. Had some meetings with the client.

7/1997 – 2/1998

Technical Team Leader. Bolivian Government. Nation-wide Fingerprint Identification System. RUN Project.

RUN Project was created to develop the Nation-wide Fingerprint Identification System. It was composed by the fingerprint technology and the Oracle Database technology.

Tasks Performed: Executed administrative tasks as team leader. Monitored other resources tasks such as Data Conversion (from Informix to Oracle), Data Loading, Developer/2000 modules development, Oracle DB installation, Sun OS configuration, etc. Coordinated efforts between the fingerprint technology team and Oracle team. Designed Logical and Physical Database. Had meetings with the client for initial Database Design validation. Wrote C/Pro*C daemons on SUN OS platform for integrating fingerprint technology with the Oracle DB. Wrote C/Pro*C code for LONG RAWs handling. X Server Configuration on Sun OS. Developer/2000 for Sun OS installation. Oracle Replication Design and Implementation. Developer/2000 modules development.

3/1997 – 7/1997

Consultant. Bolivian Government. Integrated Financial System. SAFCO ILACO Project

SAFCO ILACO was a project created for developing an Integrated Financial System for the Bolivian Government Agencies. It was based on Informix DB.

Tasks Performed: Informix-4GL modules development. Linux installation, general configuration and administration. Visual Development Tools evaluation (Visual Basic, Power Builder, Delphi).

EDUCATION

University of Maryland, College Park. 09/2003-Present

PhD Student, **Computer Science**.

University of Maryland, College Park. 09/2003-12/2006

Master of Science, **Computer Science**.

San Andres University. La Paz, Bolivia. 01/1997.

Bachelor of Science, **Computer Science**.

Thesis Work: Speech Recognition with **Neural Networks**.

Awards: Recognition for Academic Excellence by the Bolivian Government (1996).

Best Student in Computer Science Department (1995).
5 Additional Academic Awards, including Best Grade in Calculus III (Differential Equations) and Calculus IV (Complex Variables) Courses.

Oracle Certification Program. 01/2002.
Internet Applications Developer Oracle Certified Professional (OCP).

Oracle Certification Program. 02/2002.
Applications Developer R2 Oracle Certified Professional (OCP).

Río Grande Bible Institute. Edinburg, TX. 05/1999.
Biblical Studies Certificate
Awards: Graduated with Honors (GPA 3.9/4.0)

SEMINARS AND COURSES

E-Business Projects. Oracle – OSTC. 04/2002.
Oracle 9iAS R2 Features and J2EE Applications. Oracle Argentina. 04/2002.
Oracle Open World 2001, San Francisco, CA. 12/2001.
Oracle DB Tuning. Oracle University. 08/2001.
IT Projects Management. Oracle – OSTC. 04/2001.
Java Programming. Oracle University. 06/2000.
Develop Database Applications with Java – Part 1 (JDeveloper). Oracle University. 06/2000.
Develop Database Applications with Java – Part 2 (JDeveloper). Oracle University. 06/2000.